EPI-LOG

Communicable Disease and Epidemiology News

Published continuously since 1961

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Vol. 47, No. 4 **April 2007**

Select Travel-Associated Infections Reported in King County

Each month, on average, 23 travel-associated notifiable infections are reported to Public Health. Between 2003 and 2006, we received reports of 1,013 cases where exposure to infection likely occurred during international travel. Enteric infections (896, including hepatitis A) make up the vast majority of these travel-associated cases, followed by mosquito and tick borne infections (89), primarily malaria (57). The following cases illustrate the importance of pre-travel counseling and post-travel health care for common categories of illness.

Enteric Infection - *Salmonella* Typhi:

In May, 2005 Public Health was notified of an infant with a positive urine culture for *Salmonella* Typhi. During the investigation, we learned that the infant's mother had had a diarrheal illness approximately 1 week after returning from a trip to India 2 months prior. The mother's stool was positive for *S.* Typhi, nearly 2 ½ months following the onset of her illness.

Sixteen cases of typhoid fever were reported in King County between 2003 and 2006. One case was in a recent immigrant from India, and one case was in child of an India-acquired case (listed above). The remaining 14 cases were associated with travel outside of the United States. The majority of travel associated typhoid fever cases had traveled to South Asia (8 to India and 1 to Nepal); in addition, one case each had traveled to Uganda, Ghana, Philippines, Iraq and El Salvador.

The risk of transmission to others can be reduced by follow-up stool testing of typhoid cases to ensure eradication of the organism, and stool testing of contacts, especially those in sensitive occupations such as healthcare, childcare or food service. For all cases of typhoid fever contact Public Health to facilitate the proper collection and timing of follow-up tests.

Take home lesson: Before patients travel to countries at high risk for typhoid fever, vaccinate them against typhoid fever and reinforce food and water precautions, hand washing and educate them on symptoms of potentially serious travel-related infections. Educate patients about the need to seek medical advice when symptoms appear after travel. Report suspect or confirmed cases of typhoid fever immediately to Public Health at 206-296-4774.

Febrile Rash illness: Imported Measles

In January, 2007, we were notified of an adult man admitted to a King County hospital with fever (40ºC), conjunctivitis, Koplik spots, and a descending rash beginning the day before. The patient recently returned from a 2-week trip to Thailand with friends. Measles was suspected and the serum IgM was positive, confirming the diagnosis. Although the patient sought medical advice prior to leaving for Thailand and was immunized against tetanus, hepatitis A, and hepatitis B, a measles immunization history was not obtained and MMR vaccine was not administered. The friends this person traveled with were all found to be immune to measles and no additional cases were identified. The case remained hospitalized for 10 days

Take home lesson: Although the risk for measles exposure is currently low in most areas of the United States and the Western Hemisphere, this risk remains high in many other regions and measles continues to be imported into the United States. Know your patients measles immune-status. Two-doses of measles containing-vaccine are recommended for most international travelers born in or after 1957. Report suspect or confirmed cases immediately to Public Health at 206-296-4774.

Multi-system Illness with Fever: Leptospirosis

A high school student presented to a King County emergency department after returning from a 3 week trip to Costa Rica with a tour group. The group spent time swimming in rivers and waterfalls. They also visited a turtle reserve. The student complained of a 4 day illness beginning with fever, headache, and eye pain, followed by body aches, malaise, stomach cramping, and vomiting. Acute phase serology collected 7 days after symptom onset was negative for leptospirosis; convalescent testing 13 days after onset revealed a significantly elevated antibody titer for leptospira serovar tarassovi.

Take home lesson: Consider leptospirosis (along with rickettsial disease, malaria, and more) in adventure travelers and other travelers with exposure to water through swimming, wading, or rafting in lakes or rivers. Educate your patients about the risk of leptospirosis with these activities and instruct them to seek medical attention should symptoms develop. Report cases of leptospiroris within 3 working day of diagnosis to Public Health at 206-296-4774.

Multi-system Illness with Fever: Malaria

Between 2003 and 2006, 57 King County residents developed malaria infections during travel. Of the 47 cases known to have taken pre-exposure prophylaxis, only 35% took the recommended treatment dose and duration. Eighteen (32%) cases were hospitalized, with one reported death.

Take home lesson: For patients traveling to malarious areas, prescribe appropriate chemoprophylaxis (in consultation with an expert in travel medicine when necessary) and emphasize the importance of taking medications exactly as prescribed. Patients should be instructed to seek medical evaluation promptly for fever during travel and after returning from their trip. Report

cases of malaria within 3 working days to Public Health at 206-296-4774.

Animal Bites during Travel: Rabies Exposures

More than 13% (40/295) of reported potential rabies exposures among King County residents between 2003 and 2006 occurred while traveling outside the United States. Exposed travelers are most commonly accosted by potentially rabid dogs, cats, bats, and monkeys while abroad.

Take home lesson: Travelers to rabies-endemic countries should be warned about the risk of acquiring rabies. Although rabies vaccination is not a requirement for entry into any country, travelers to rabies endemic areas planning extensive outdoor exposure in rural area (such as might be experienced while bicycling, camping, hiking, or engaging in certain occupational activities), might be at increased risk even if their trip is brief. The need for rabies pre-exposure prophylaxis should be considered by the health care provider conducting the pre-travel assessment. Casual exposure to cave air is not an indication for pre-exposure prophylaxis, but cavers should be warned not to handle bats. Report suspect rabies exposures to Public Health immediately at 206-296-4774. For more information on rabies risk and travel, see: www2.ncid.cdc.gov/travel/yb/utils/ybGet.asp?section=dis&obj=rabies.htm

Reasons to Report Suspected or Confirmed Travel-Related Notifiable Diseases to Public Health*

- **Consultation on diagnosis, treatment and testing:** Public Health can help facilitate diagnosis and management of travel-related infections. In certain cases, Public Health can expedite diagnostic testing through the public health laboratory (e.g., measles) and/or the Centers for Disease Control & Prevention. A Public Health epidemiologist is on-call "24/7" at 206-296-4774.
- **Disease control measures**: Public Health can implement measures to prevent transmission to others in the public (e.g., exclusion of food workers with typhoid from work until they are typhoid-free), and conduct contact tracing and monitoring.
- **Infection control measures:** Public Health can provide infection control recommendations to prevent transmission in the household and healthcare settings.
- **Health Education**: Public Health can provide counseling and written information to patients and their families.
- **Post-exposure prophylaxis:** Public Health can facilitate evaluation for, and administration of, post-exposure prophylaxis for many diseases, including rabies, measles, hepatitis A, varicella, and hepatitis B.
- **Assurance of follow-up care for under- or un-insured patients or their contacts**: Public Health can provide referrals for care to patients who require significant medical follow-up (e.g., typhoid fever patients), and for contacts who may require post-exposure prophylaxis or treatment.

Location and hours of Public Health Travel Clinics for pre-travel assessments can be found at: www.metrokc.gov/health/immunization/travelclinics.htm, or by calling the communicable disease hotline at 206-296-4949. There are also private travel medicine experts located throughout King County. Extensive international travel-related information can be found at: www.cdc.gov/travel.

Healthcare providers are also legally obligated to report these conditions in Washington State.

Disease Reporting

AIDS/HIV	(206) 296-4645
STDs	(206) 731-3954
TB	(206) 731-4579
All Other Notifiable Communicable Diseases (24 hours a day)	(206) 296-4774
Automated reporting line for conditions not immediately notifiable	(206) 296-4782

Hotlines

Communicable Disease	(206) 296-4949
HIV/STD	(206) 205-STDS

Public Health-Seattle & King County Online Resources

Home Page: www.metrokc.gov/health/
The *EPI-LOG*: www.metrokc.gov/health/providers
Communicable Disease listserv (PHSKC INFO-X) at: mailman.u.washington.edu/mailman/listinfo/phskc-info-x
West Nile Virus Updates and Current Testing Guidelines: www.metrokc.gov/health/westnile/advisories.htm

Reported Cases of Selected Diseases, Seattle & King County 2007

	Cases Reported in March		Cases Reported Through March	
	2007	2006	2007	2006
Campylobacteriosis	14	17	52	52
Cryptosporidiosis	3	0	5	2
Chlamydial infections	423	582	1,386	1,394
Enterohemorrhagic *E. coli* (non-O157)	0	0	2	0
***E. coli* O157: H7**	1	2	5	3
Giardiasis	13	13	40	26
Gonorrhea	119	219	400	481
***Haemophilus influenzae* (cases <6 years of age)**	0	0	0	0
Hepatitis A	0	1	1	0
Hepatitis B (acute)	0	1	4	5
Hepatitis B (chronic)	74	67	208	191
Hepatitis C (acute)	1	3	4	3
Hepatitis C (chronic, confirmed/probable)	125	142	348	375
Hepatitis C (chronic, possible)	34	24	97	86
Herpes, genital (primary)	39	72	179	199
HIV and AIDS (including simultaneous diagnoses with AIDS)	32	28	89	71
Measles	0	0	0	0
Meningococcal Disease	0	2	1	3
Mumps	0	1	1	2
Pertussis	0	15	11	43
Rubella	0	0	0	0
Rubella, congenital	0	0	0	0
Salmonellosis	19	17	52	43
Shigellosis	5	1	13	4
Syphilis	10	22	25	58
Syphilis, congenital	0	0	0	0
Syphilis, late	7	0	15	9
Tuberculosis	13	7	38	18

The *EPI-LOG* is available in alternate formats upon request.